

With respect to Mill Process Operators, the Ministry has undertaken the development of training modules for a major segment of the occupation in co-operation with industrial officials. To date, a bank of some 200 modules has been developed covering the specific skill requirements of grinder, dryer, filter and flotation operators.

As these initiatives demonstrate, the province's modular training program has been experiencing a tremendous expansion over the past several years. From its inception as the first of its kind in North America, the program has grown to the point today where well over 1 600 training modules have been approved, validated and entered into the Ministry's computer library. More than 150 distinct training programs have been developed through this process involving a total of 18 400 active trainees.

The wide application of these programs throughout Ontario demonstrates that modular training is a most productive, effective and appropriate approach to training in a great number of occupational areas, and one which is rapidly gaining acceptance by industry at large. Significant increases continue to be experienced both with respect to the number of programs initiated and trainees enrolled, and at this writing active modular training programs are in operation in such diverse occupational areas as:

- boilermaking
- welding
- electrical maintenance
- instrumentation
- industrial maintenance
- pipefitting
- building maintenance
- appliance servicing
- precision metal machining
- refrigeration and air conditioning
- sheet metal work
- industrial electronics
- underground hard rock mining
- mineral ore treatment
- stationary engineering
- front-end loader operating
- bridge crane operating
- railway locomotive operating
- industrial heavy equipment repair

For further information on modular training, and how the program can be of direct benefit to you, please contact an Industrial Training Consultant at an office listed below.

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**THE  
ONTARIO  
MODULAR  
TRAINING  
SYSTEM**

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## The Ontario Modular Training System

In its simplest terms, modular training is a performance-based training system which is delivered in incremental steps with accreditation for trainees provided at every interval. Although there is only one provincially authorized system in Ontario, a great many other ad-hoc modular programs are in use throughout the province. The official modular training program was inaugurated in 1968.<sup>1</sup> It is now supported by an administrative system which holds on computer a coded list of all available modules, all established modular training programs, as well as a specific accreditation record for individual trainees.<sup>2</sup>

The modular concept begins by asking the question, "What does a worker actually do?" rather than the traditional, "What is a worker called?". In answering that question, a detailed analysis across industry is undertaken to identify and group into modules the skill and knowledge components required in the actual work environment. Once assembled into a matrix, these reflect the complete scope of activities in that environment, and provide the basis from which specific work profiles or job requirements may be selected. The modules which comprise a tailored training package are known as the job or occupational training profile. Whereas an unskilled worker would need to become proficient in all of the modules which make up the profile for a skilled job, the skills which a new worker brings to his job can easily be determined by pre-testing, and individual training needs determined accordingly.

Significant occupational shifts are rapidly occurring in Ontario's labour market today, and a growing need exists for individuals to broaden or re-define their skills inventory through the acquisition of specialized skills. These skills, of course, may be common to a single industry or, indeed, across several industries as the case may be. In that context, the

benefits of modular training may be summarized as follows:

1. Training is based on an employer's actual needs, and training objectives and standards are precisely defined.
2. Uniform training standards established for major industrial sectors promote individual mobility in the labour market.
3. Training to pre-determined standards can be accomplished in minimum time.
4. An effective means is provided for assessing trainee progress on a continuing basis, and issuing to trainees an accreditation record which, at any point in time, indicates precisely what skills have been acquired.
5. Given the fact that workers may add skills according to their own capacity or motivation to learn, incentives are provided which effectively promote individual self-improvement.
6. The system itself is capable of retraining or upgrading existing staff as well as providing entry level skills to newly recruited workers.

While, in general, each new program can build on established modules, many new modular programs require the development of additional modules representing skills not previously analysed. The development and approval of modules and modular training packages is a continuing responsibility of the Ministry of Colleges and Universities for such diverse client groups as government, private industry, colleges, secondary schools and other training agencies. Some major activities undertaken recently in specific industry sectors are highlighted below.

**Metal Machining** One of the very early pilot projects, this initiative has had a far-reaching influence on training in the precision metal machining trades in the intervening years. From a modest beginning in Windsor in 1970, the program has expanded to the Kitchener, Metro Toronto and Oshawa areas.

**Stationary Engineers** The modular program introduced in 1972 for the training of Stationary Engineers has recently been carefully reviewed and revised. The new training profile, developed for Stationary Engineers in a specific learning objective format, now comprises a total of twenty-six modules printed in four volumes – one volume for each class. Over 3 600 Stationary Engineers are currently engaged in upgrading their skills under the program; some by means of home study (approximately 60%), and others through courses provided by nineteen of the twenty-two community colleges in Ontario.

**Major Appliance Servicing** A very active modular program has been in operation for some time in the major appliance servicing industry to train service technicians in the installation, servicing and repair of laundry equipment, refrigerators, air conditioning units and microwave ovens. Having produced quality technicians in Ontario for a number of years, the program has sufficiently impressed its sponsor, The Canadian Electronics and Appliance Service Association, that similar initiatives in other provinces are now being actively considered.

**The Petrochemical Industry** In 1971, at the request of a company in the petrochemical industry in the Sarnia area, a modular training program was developed to improve the skills of mechanical maintenance workers in such occupations as Millwright, Instrumentation Mechanic, Pipefitter and Plant Electrician. The program itself has been very well received by the industry to date, and a total of sixteen major petrochemical companies currently have a combined involvement in 68 modular training programs for their mechanical maintenance work force.

**Initiatives in the Mining Industry** Significant initiatives are being pursued in the mining industry today in the development of training modules both for Underground Hard Rock Miners and Mill Process Operators. In the former area, a training package (including a Common Core of required skills and 36 specialty skills) provides guidelines for structured training in the industry and, at long last, has enabled workers to qualify for Ministry certification as "Underground Hard Rock Miners".

1. The official modular training system is detailed in two publications of the Ministry of Colleges and Universities – *Modules Catalogue: Ontario Modular Training System* and *Programs Catalogue: Ontario Modular Training System*.

2. Accreditation in the Modular System may also apply under *The Apprenticeship and Tradesmen's Qualification Act* in certain circumstances. The policy statement in that regard is available from the Apprenticeship Branch and is entitled "Modular and Other Innovative Training Programs – Policy Respecting Eligibility to Write C of Q Examinations in Ontario".